

MULTIMEDIA



UNIVERSITY

STUDENT IDENTIFICATION NO

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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 2, 2018/2019 SESSION

### BAC 2624 – MANAGEMENT ACCOUNTING II

(All Sections / Groups)

09 MARCH 2019  
2.30 p.m. – 5.30 p.m.  
(3 Hours)

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#### INSTRUCTION TO STUDENT

1. This Question paper consists of 8 pages (excluding cover page) with 4 Questions only.
2. Answer **ALL** Questions. The distribution of the marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

**QUESTION 1**

Fit-Life Equipment Sdn Bhd is a manufacturer of exercise machines for home use and fitness centers. One of the most popular fitness machine is its treadmill machine model PRO 9000. Details of the selling price and related cost of PRO 9000 is as follows:

Selling price per unit	RM 4,800
Variable cost per unit	RM 2,540
Fixed cost per unit	RM 1,140
Average production per production run	5,000 units
No. of production run a year	4
Maximum production run a year (plant capacity)	6
Set up cost per production run	RM 385,000

Recently, a competitor selling the same type of exercise equipment is planning to introduce a similar type of treadmill that will sell for RM 3,650 per unit. Fit-Life Equipment Sdn Bhd is concerned about the competitor's pricing and is wondering if Fit-Life can lower its selling price to RM 3,650. The marketing manager is confident that the lower price will increase sales by 25% per year. The Production Manager estimates that production cost will increase by 25% with same level of fixed cost. Fit-Life Equipment Sdn Bhd currently sells all the model PRO 9000 that it produces.

**Required:**

- a) What is the annual operating income from model PRO 9000 at the current selling price of RM 4,800 per unit?

(5 marks)

- b) What is the annual operating income from PRO 9000 if the price is reduced to RM 3,650 and sales in units increases by 25%?

(5 marks)

- c) What is the target cost per unit for the new price if target operating income is 30% of sales?

(4 marks)

- d) Based on your computation in (b), what is the unit production cost for one unit of PRO 9000?

(3 marks)

**Continued...**

- e) What is the difference – “cost gap” between the target cost per unit in (c) and the unit production cost for one unit of PRO 9000 computed in (d)?

(2 marks)

- f) Explain what should Fit-Life Equipment Sdn Bhd undertake to close the cost gap and the type of cost that needs to be eliminated to achieve the target cost per unit?

(6 marks)

[Total 25 marks]

## QUESTION 2

HD Electronics Sdn Bhd is a manufacturer of electronic alarm systems for home and commercial use. Last year HD Electronic Sdn Bhd introduced its first security camera. This basic model, call the HDCAM has become a best seller. HD Electronic Sdn Bhd has two divisions, the Product Division and the Electronics Division.

The Electronics Division manufactures all the electronic components that is required by the Product Division to assemble the alarm systems and the HDCAM. All the electronic components manufactured by the Electronic Division can be sold to outside customers. However, the company's policy is that all components manufactured by the Electronics Division is to be used internally. All internal transfers are to be done at full cost.

One of the key component manufactured by the Electronics Division is an electronic circuit board, EC200 which is used in the assembly of HDCAM.

Recently, HD Electronics Sdn Bhd appointed a new General Manager and one of his key task was to review the current transfer pricing policy of the company. His concern is that the current transfer pricing policy may lead to division manager making decisions that would be suboptimal to the company as a whole.

As part of the review, he gathered some information on component EC200 which is used by the Product Department in the production of HDCAM. The product division sell 48,000 units of the HDCAM at a unit price of RM 80.00. The cost of manufacturing HDCAM is as follows:

Items	RM
Component EC200	12.35
Direct material cost	23.75
Direct labor cost	5.85
Variable overhead cost	1.90
Fixed overhead cost	28.15
Total unit cost	72.00

The manager of the Electronic Division indicated that they were producing at full capacity of 48,000 units for the EC200 components. All of these 48,000 units have an external market and can be sold to outside buyers at RM 23.00 per unit. The manager of the Electronics Division provided the following information:

Continued...

Items	RM
Direct material cost	4.75
Direct labor cost	0.95
Variable overhead cost	1.90
Fixed overhead cost	4.75
Total unit cost	12.35

**Required:**

- a) Compute the total contribution margin in relation to component EC200 and HDCAM for both Divisions. What is the total contribution margin for HD Electronics Sdn Bhd as a whole?

(8 marks)

- b) Suppose the General Manager abolishes the current transfer pricing policy and allows the division managers the autonomy to set the transfer price. What is the minimum transfer price that the manager of the Electronic division would set for EC200?

(4 marks)

- c) Based on the transfer price calculated in (b) what is the total unit cost of production of the HDCAM for the Product Division? At this transfer price, will the Product Division make a loss?

What course of action(s) would the manager of the Product Division consider to take? Explain your answer.

(10 marks)

- d) Assume now that the external market for EC200 has softened and only 45,000 units of EC200 can be sold externally. There is no external market for the remaining 3,000 units of EC200. What is the transfer price for the 3,000 units that the Electronic Division would offer to the Product Division? Explain your answer.

(3 marks)

[Total 25 mark]

**QUESTION 3****PART A**

- a) Joint cost is the cost of a single production process that yields multiple products simultaneously. Are joint cost relevant in a sell or process further decision? Explain.

(3 marks)

Continued...

XYZ Sdn Bhd manufactures three (3) products from a common input. The joint cost of the process is RM 380, 000. Additional information is as follows:

Product	Selling Price RM	Output per Quarter
X	18	16,000 pounds
Y	10	21,000 pounds
Z	20	5,100 gallons

**Required:**

- b) Calculate the joint cost allocated to product X, Y & Z using the sales value at split of method.

(3 marks)

Assume that each of the above products can be processed further after the split of point. No special facilities are required for this additional processing. The additional processing costs and the unit selling price after processing further is tabulated below:

Product	Additional Processing Cost RM	Selling Price RM
X	70,000	22 per pound
Y	81,000	15 per pound
Z	34,000	25 per gallon

**Required**

- c) Based on the data provided, which product should be sold at the split off point and which product should be processed further? Show your computations.

(4 marks)

**PART B**

Gaya Printers Sdn Bhd operates a printing business. Currently, it has a printing machine which was purchased a few years ago. With the current growth in its printing business, the current machine may reach it's maximum printing capacity in the next 6 months. Management is thinking of replacing the current machine with a digital automated printing machine which would substantially reduce its operating cost and increase its revenue. The following cost data has been estimated by the costing department:

Continued...

	RM
Cost of the new digital automated printing machine	5,000,000
Cost of installation and commissioning the new machine	125,000
Book value of the current printing machine	2,000,000
Salvage (sales) value of the current printing machine	500,000
Annual operating cost for the new digital printing machine	300,000
Annual revenue from the new digital printing machine	1,400,000

The new digital automated printing machine has a useful life of four (4) years. The estimated depreciation charges for the new machine is as follows:

Year	Depreciation charges (RM)
1	2,082,500
2	1,249,500
3	749,700
4	449,820

The salvage value of the machine is estimated to be RM 1,005,120 at the end of year 4. The taxation rate is 36% and the company has a required rate of returns of 10%.

### **Required**

- a) Calculate the net present value (NPV) of the digital automated printing machine. Will Gaya Printers Sdn Bhd proceed with the investment?

*(Show all calculations & schedules. Round up all decimal points).*

(15 marks)

[Total 25 marks]

## **QUESTION 4**

### **PART A**

- a) What is the economic order quantity (EOQ) model? The EOQ model is not realistic as it does not take into account all other cost associated with goods for sale. List and explain three (3) types of cost that is not taken into account in the model.

(3 marks)

Continued...

Milan Industry Sdn Bhd manufactures and distributes plastic storage containers for industry use. One of the key ingredient used in the manufacturing process is a chemical RS2. The chemical is purchased in ten 100 gallon drums for RM 95.00 each. The company uses 4,800 drums annually. The cost of order and receiving is RM 150.00 per order. The storage cost annually is RM 4.00 per drum.

**Required**

- b) Calculate the economic order quantity (EOQ) for the RS2 chemical.  
(2 marks)
- c) What is the annual relevant total cost of ordering and storing the RS2 based at the economic order quantity (EOQ)? How many orders will be placed in year?  
(2 marks)
- d) Assume that the EOQ was calculated based on the wrong prediction that the order cost was RM 85 instead of RM 150. What is the cost of the prediction error?  
(3 marks)

**PART B**

- a) Companies are increasing adopting Just In Time (JIT) production systems. List and explain three (3) key features of a JIT production system.  
(3 marks)

PG Plactics Sdn Bhd manufactures plastic storage bins used by various industries. PG Plastics Sdn Bhd implemented JIT purchasing and production system about six months ago and adopted backflush accounting system to support its operations. The backflush accounting system has three (3) trigger points to record the journal entries. These trigger points are:

1. Purchase of raw materials
2. Completion of finish goods
3. Sale of finished goods

**Continued...**

The following transaction occurred for the month of October 2018:

a.	Purchased raw materials	RM 6,411,250
b.	Incurred conversion cost:	
i.	Labor cost	RM 2,168,750
ii.	Manufacturing overhead cost	RM 3,935,000
c.	Finished good completed in units	241,500
d.	Sales in units	236,900

There was no opening inventories of raw materials, work in progress or finished goods as at 1<sup>st</sup>. October 2018.

The standard cost per unit of the plastic bin is RM 56.00. This comprises of RM 31.00 for direct materials and remaining balance of RM 25.00 is conversion cost.

**Required:**

- b) Record the journals entries for the transactions for the month of October 2018.

(10 marks)

- c) Explain two (2) key criticism on the use of backflush accounting system.

(2 marks)

**[Total 25 marks]**

**Continued...**



**APPENDIX**

<u>Periods</u>	<u>Present Value of \$1</u>								
	<u>4%</u>	<u>6%</u>	<u>8%</u>	<u>10%</u>	<u>12%</u>	<u>14%</u>	<u>16%</u>	<u>18%</u>	<u>20%</u>
1	.962	.943	.926	.909	.893	.877	.862	.847	.833
2	.925	.890	.857	.826	.797	.769	.743	.718	.694
3	.889	.840	.794	.751	.712	.675	.641	.609	.579
4	.855	.792	.735	.683	.636	.592	.552	.516	.482
5	.822	.747	.681	.621	.567	.519	.476	.437	.402
6	.790	.705	.630	.564	.507	.456	.410	.370	.335
7	.760	.665	.583	.513	.452	.400	.354	.314	.279
8	.731	.627	.540	.467	.404	.351	.305	.266	.233
9	.703	.592	.500	.424	.361	.308	.263	.225	.194
10	.676	.558	.463	.386	.322	.270	.227	.191	.162

<u>Periods</u>	<u>Present Value of a Series of \$1 Cash Flows</u>								
	<u>4%</u>	<u>6%</u>	<u>8%</u>	<u>10%</u>	<u>12%</u>	<u>14%</u>	<u>16%</u>	<u>18%</u>	<u>20%</u>
1	0.962	0.943	0.926	0.909	0.893	0.877	0.862	0.847	0.833
2	1.886	1.833	1.783	1.736	1.690	1.647	1.605	1.566	1.528
3	2.775	2.673	2.577	2.487	2.402	2.322	2.246	2.174	2.106
4	3.630	3.465	3.312	3.170	3.037	2.914	2.798	2.690	2.589
5	4.452	4.212	3.993	3.791	3.605	3.433	3.274	3.127	2.991
6	5.242	4.917	4.623	4.355	4.111	3.889	3.685	3.498	3.326
7	6.002	5.582	5.206	4.868	4.564	4.288	4.039	3.812	3.605
8	6.733	6.210	5.747	5.335	4.968	4.639	4.344	4.078	3.837
9	7.435	6.802	6.247	5.759	5.328	4.946	4.607	4.303	4.031
10	8.111	7.360	6.710	6.145	5.650	5.216	4.833	4.494	4.192

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